EXHIBIT 8

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VIA EMAIL

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Re: *Ocean Semiconductor LLC v. STMicroelectronics, Inc.*, No. 6:20-cv-1215 (W.D. Tex.)

Dear Mr. Bowen,

I am writing in response to STMicroelectronics's correspondence of August 11, 2021 ("Correspondence") regarding Ocean's Preliminary Infringement Contentions served on July 2, 2021 ("PICs").

Claim Narrowing

In the Correspondence, STMicro proposes that "Ocean narrow the number of claims to 50 or fewer on or before August 20, 2021." (Correspondence at 1.)

As a preliminary matter, the Court's Scheduling Order (Dkt. 34) provides two separate deadlines—June 8, 2022, and September 7, 2022—for the parties to meet and confer on "narrowing the number of claims and prior art references at issue." The Scheduling Order does not require Ocean to narrow the number of claims in advance of these court-mandated deadlines. Nor does the Scheduling Order require Ocean to do so without STMicro's bilateral participation in reducing the number of prior art references in parallel. It would also be unduly prejudicial to Ocean to narrow the number of asserted claims, as STMicro now demands, without the benefit of receiving and reviewing the Court's claim construction order and STMicro's final invalidity contentions in the same way that STMicro would be prejudiced if Ocean were to demand STMicro to dismiss certain prior art references after serving its preliminary invalidity contentions without these same benefits afforded by the Court and the Scheduling Order.

For at least these reasons, Ocean respectfully declines STMicro's request for Ocean to narrow the number of claims based on a deadline unilaterally set by STMicro. Ocean, however, is open to further discussion on ways in which to streamline this litigation, including the possibility of amending the Scheduling Order to allow either, or both, of the foregoing deadlines to occur sooner.

’651 Patent

As a general matter, STMicro’s alleged concerns with respect to Ocean’s PICs as to the ‘651 Patent are not directed to whether Ocean has provided sufficient notice of its infringement theories, but rather to arguments about the sufficiency of Ocean’s infringement evidence. Because STMicro does not dispute that it is on notice, however, nothing more is required. *See, e.g.*, *Motion Games, LLC v. Nintendo Co., Ltd.*, No. 6:12-cv-878, 2015 WL 1774448, at *2 (E. D. Tex. Apr. 16, 2015) (“Infringement contentions are not intended to act as a forum for argument about the substantive issues but rather serve the purpose of providing notice to the Defendants of infringement theories beyond the mere language of the patent claim”). Nevertheless, to avoid further argument, Ocean will address STMicro’s alleged concerns.

a. Claim 19

As to the ’651 patent, STMicro indicates that “Lorentz actuators (i.e., electromagnetic actuators) are not pneumatic cylinders.” (Correspondence at 1-2.) Ocean disagrees.

First, nowhere does the specification support STMicro’s position that Lorentz actuators are not pneumatic cylinders. The portion of the specification cited for this proposition only discloses that “[a] mechanism useful in adjusting the position of the wafer stage 40 ***may be comprised of any of a variety of devices,*** such as pneumatic, hydraulic, electromagnetic or mechanical systems” (’651 patent, 5:65-6:1; emphasis added.) Neither this portion, nor anywhere else in the specification, requires that all of these devices must be different and/or non-overlapping in functionality (a narrow position that STMicro seems to be taking). Nor did the inventor disclaim Lorentz actuators during prosecution. Moreover, whether a Lorentz actuator is or is not a pneumatic cylinder depends on claim construction, potential expert testimony, and fact discovery. As this matter remains in its early stages, it is premature for STMicro to take on how a particular claim term should be construed.

Also, Ocean has asserted infringement of the ’651 patent under the doctrine of equivalents. (*See* Dkt. 1 at ¶¶ 83, 85, 88; *see also* PICs at 11-12.) We welcome STMicro’s reasoning as to why STMicro does not infringe under this alternative theory of infringement.

b. Claim 20

Next, STMicro asserts that the TWINSCAN tool “is a lithography machine and is not capable of performing etching or deposition; nor does it include an “etching chamber” or “deposition chamber.” (Correspondence at 2.) Assuming that STMicro is referencing the claim language recited in claim 20, that claim is a ***method*** claim. As part of the manufacture of the ’651 Infringing Instrumentalities, there is no reasonable dispute that they are subject to deposition and etching, as reflected in the PICs (*see, e.g.*, Appendix A1 at 18-19).

Based on the Correspondence, it appears that STMicro is attempting to delineate etching and deposition from lithography to avoid infringement. This, however, is not supported by

ASML's own documentation, which reflects that "etch control," for example, is an integrated part of the "[c]omputational lithography" to achieve "[s]canner control." (PICs, Appendix A1 at 18-19.) The same is true for deposition, where "context data" from deposition (and etching), for example, is used for lithography "[c]orrections." (*Id.* at 18.) ASML also describes the use of TWINSCAN to perform deposition. (*See id.* at 27) ("Patterning was achieved by depositing 100nm SOC, 30nm spin-on-glass (SOG), 29nm Anti-Reflective Coating (ARC), and 105nm photoresist (PR) in an ASML Twinscan NXT:1950i 193nm immersion scanner, followed by lithographic patterning of line/space patterns.") Without deposition or etching, the TWINSCAN tool cannot perform lithography corrections or scan control.

In that regard, nothing in claim 20 requires that the deposition or etching chamber be embedded in, or integrated with, the same system or machine as the one that performs the method of claim 19. Nor does claim 20 (or claim 19 from which claim 20 depends) require deposition or etching to be performed, or to be performed by the same machine that performs the method of claim 19. Surely STMicro is not arguing that the method of claim 19 must be performed in a deposition or etching chamber in order to demonstrate infringement of claim 20. Absent otherwise, Ocean believes that its PICs have properly demonstrated Ocean's contention that STMicro infringes claim 20.

c. <u>Claim 24</u>

As to claim 24, STMicro indicates that "the identified movement is 'horizontal' (not raising, lowering, or tilting, as the claim requires)." (Correspondence at 2.) As a preliminary matter, nothing in claim 24 requires a showing of "raising, lowering, or tilting." Instead, claim 24 requires only that "at least one of three pneumatic cylinders, each of which are operatively coupled to said wafer stage by a ball and socket connection" is actuated, which is shown in the PICs. (Appendix A1 at 29-30.) In that regard, Ocean's contentions for claim 19 (from which claim 24 depends) demonstrate how the wafer stage performs "raising, lowering, or tilting," using the Lorentz actuators, for example, in the "z-direction." (*see, e.g.*, *id.* at 9-13.)

In addition, STMicro's suggestion that the identified movement is limited to "horizontal" is factually incorrect. For example, the "Position Control" article cited in the PICs states that "[o]ne linear motor drives the stage in the *x* direction" where "[t]he *x* motor itself can be moved in the *y* direction as well as in a rotational direction *θ around the z axis*, by means of two linear *y* motors." (Position Control at 31.) In other words, the *x* actuator described in connection with Fig. 5 can move horizontally (e.g., in the *x* or *y* direction) as well as vertically (e.g., in the *z* direction), thus meeting the claim language of claim 24.

STMicro also questions that "the ball bearings are not operatively coupled to the Lorentz actuators (i.e., what Ocean asserts are the "pneumatic cylinders") but are instead described in connection with the linear motors." (Correspondence at 2.) Ocean disagrees. The "linear actuators" described in connection with FIG. 5 references the Lorentz actuators, not linear motors. The "Position Control" article makes this clear when it describes the Lorentz actuators as linear actuators. (*See, e.g.*, Position Control at 37.) This makes sense because the description for Fig. 5 says that "the linear actuators are connected to t[he granite] stone." The motors,

however, are not connected to the stone. (*See, e.g.*, Fig. 7.) When viewed in light of these references, it seems clear that the ball bearings are used in connection with the linear Lorentz actuators, not motors.

d. Claims 21, 73, and 78

As to claims 21, 73, and 78, STMicro contends that Ocean has not provided "any evidence that the wafer is placed on the wafer stage after the stage has been adjusted (raising, lowering, or tilting, as required by the claims." (Correspondence at 3.) STMicro also states that "the wafer is already on the stage" during the "synchronized zig-zag movement." (*Id.*) It appears that STMicro has omitted certain key contentions in the PICs.

For example, Ocean's PICs specify that the wafer is positioned "on the wafer table of the dual-wafer stage after the exposure of a previous wafer is done and the exposure table is adjusted to receive a new wafer for the next cycle of exposure." (Appendix A1 at 27-28.) Ocean's PICs also describe that "the exposure table is re-adjusted from the previous exposure before receiving the next wafer." (*Id.* at 28.) This readjustment, which necessarily includes raising, lowering, or tilting, is due to the different height maps between the various wafers (e.g., between preceding and subsequent wafers to be exposed) as well as the 6DOF alignment performed during the exposure, as explained in the Position Control article. (*Id.* at 14.) This meets the claim language that the wafer stage (e.g., the exposure table) is adjusted before the wafer (e.g., the incoming wafer to be exposed) is received.

e. Claims 31-32 and 34-37

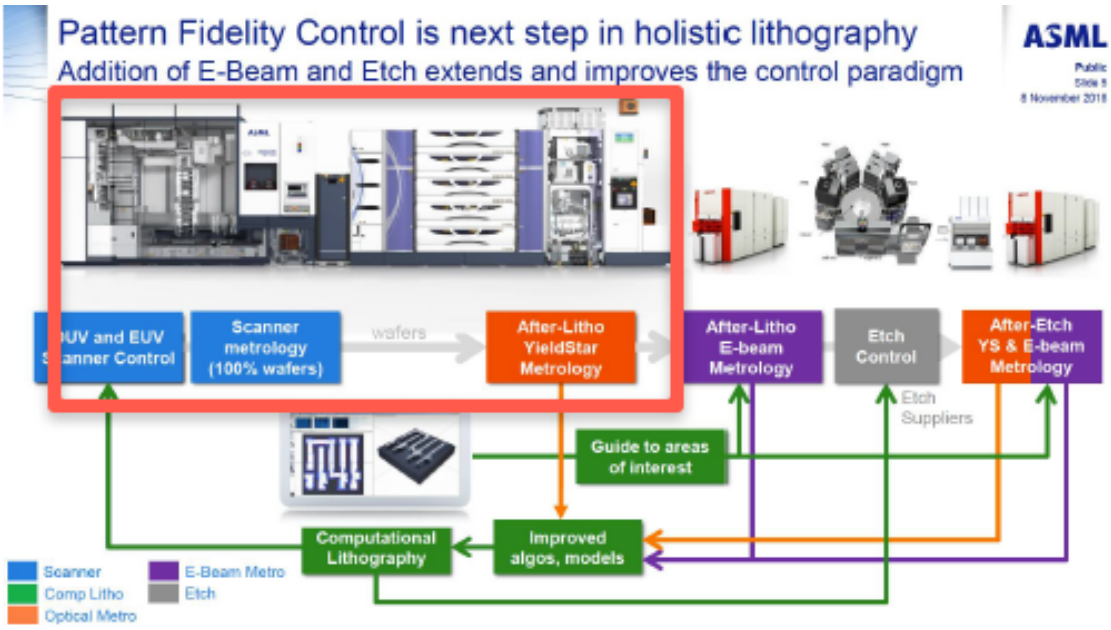
With respect to claims 31-32 and 34-37, STMicro alleges that "Ocean's purported evidence actually shows the opposite (i.e., a wafer is positioned on the stage and then the stage is adjusted)" and that "Ocean's citations . . . describe adjustments that occur after the wafer is already on the stage (e.g., during the scanning of a wafer)." (Correspondence at 3.) As a preliminary matter, claim 31 does not recite this order or the timing as to when the wafer must be placed on the stage; instead, claim 31 only specifies the order between "performing said process operation" and "said plane of said wafer stage has been adjusted." As such, contrary to STMicro's contention, the wafer can be positioned on the stage before or after the stage is adjusted. In that regard, as discussed above in connection with claims 21, 73, and 78, the wafer stage can be adjusted before a subsequent wafer is placed on the exposure table of the wafer stage.

As to STMicro's contention that "there is no evidence that . . . this adjustment occurs 'based upon said measured across-wafer variations,'" Ocean disagrees. Ocean's PICs are explicit that "the measured across-wafer variations (e.g., metrology data) are used to adjust a plane of a surface of the wafer stage by making corrections to the scale and height maps" where "[t]he metrology model implements the algorithm for conversion of the encoders signals into 6DoF." (Appendix A1 at 41.) The metrology data is then used as "[c]orrections" to adjust the plane of the surface of the wafer stage. (*Id.* at 40.) The "Constrained Iterative Feedback Tuning" article also goes into detail as to how these corrections are used for feedback control.

For at least these reasons, Ocean's PICs offer sufficient evidence to demonstrate that the wafer stage adjustment occurs based on the measured across-wafer variations.

Further, STMicro contends that "the wafer stage adjustment (for the processing of a subsequent wafer) must be based on across-wafer variations that can only be determined using measurements from a plurality of processed wafers" whereas the PICs have allegedly only shown "measurement of a single wafer, resulting in adjustments to the stage while the same wafer is still on the stage." (Correspondence at 3-4.) For reasons discussed above, STMicro's contention is misguided. Also, Ocean's PICs specify how the stage is adjusted based on across-wafer variations by subjecting the wafers to an iterative tuning manufacturing process. (Appendix A1 at 39-41 and 45-46.) For example, the wafer is subject to multiple lithography steps (N-2, N-1, and N) and multiple etching/deposition/CMP steps. In this example, adjustment of the stage at step N is based on corrections determined via across-wafer variations (e.g., as collected through metrology) in connection with steps N-2 and N-1. This is also explained in the "Lithography Principles" article, which, as noted in the PICs, describes that "[m]etrology data is analyzed in control software and fed back to the lithography system in real-time, which enables customers to tune the manufacturing process further for optimal yield." (*Id.* at 42.)

Even further, STMicro contends that "Ocean points to a separate tool (the YieldStar tool) as performing overlay and CD measurements" but "nowhere does Ocean allege that the YieldStar is used together with the TWINSCAN (which itself allegedly has the process chamber with a wafer stage." (Correspondence at 4.) This is incorrect. For example, as depicted below and in the PICs, the TWINSCAN tool and the YieldStar tool work as a single system to perform the claimed steps. (Appendix A1 at 48.) Hence, Ocean has sufficiently demonstrated that "the YieldStar is used together with the TWINSCAN." Also, Ocean cites to the Yieldstar tool at least six times in the PICs. (*see, e.g.*, *id.* at 38, 58, 59, 62.) STMicro thus has no factual basis to support its contention that it is not on notice as to the YieldStar tool.



In that regard, STMicro is reminded that the purpose of Ocean's preliminary infringement contentions is to provide STMicro notice of the specific theories of infringement so that the parties can focus discovery and narrow issues for claim construction, summary judgment, and trial. Ocean's preliminary infringement contentions are not meant to require Ocean to prove its case of infringement or provide a forum for litigation of the substantive issues. *Linex Techs., Inc. v. Belkin Int'l, Inc.*, 628 F.Supp.2d 703, 713 (E.D. Tex. 2008). "[T]hey are merely designed to streamline the discovery process." *Id.* at 713 (citing *STMicroelectronics, Inc. v. Motorola, Inc.*, 308 F.Supp.2d 754, 755 (E.D. Tex. 2004).

Additionally, STMicro states that Ocean has not explained what element constitutes the claimed "process chamber." (Correspondence at 4.) As a preliminary matter, claim 31 recites a process tool, not process chamber. While it is true that the last limitation of claim 31 states "performing said process operation . . . in said process chamber," it is clear that the term "said process chamber" is referencing the term "process tool" as recited in the first limitation of claim 31, which states "performing a process operation in a process tool . . . ." In that regard, Ocean's PICs offer several examples of a process tool, including, without limitation, the TWINSCAN and YieldStar tools, as well as the etch/deposition/CMP tools. (Appendix A1 at 46-47.)

Finally, STMicro complains that Ocean has not accused "a single TWINSCAN tool of allegedly performing each step of the claimed processes." (Correspondence at 4.) No such requirement exists for proof of direct infringement. *See SiRF Tech., Inc. v. ITC*, 601 F.3d 1319, 1331 (Fed. Cir. 2010) (finding direct infringement of method claims based on both a mobile GPS receiver and a server).

Based on the foregoing, Ocean respectfully declines to dismiss its allegations against STMicro related to the '651 patent.

'330 Patent

STMicro asserts that Ocean has pointed to "multiple models of the YieldStar tool without specifying which model, if any, is allegedly used to manufacture the accused products and without even attempting to show that all models of YieldStar tools function in the same way." (Correspondence at 4.) STMicro, however, has cited no evidence indicating that any of the YieldStar "models" function or perform in different ways in connection with the claimed methods. Also, there is no requirement that each model be charted separately and individually where all alleged models function in the same way with respect to the accused functionalities. *See Alacritech Inc. v. CenturyLink, Inc.*, No. 2:16-CV-00693-JRG-RSP, 2017 U.S. Dist. LEXIS 109638, at *8-9 (E.D. Tex. July 14, 2017) (listing cases where courts "have excused plaintiffs from charting each instrumentality if . . . one instrumentality is sufficiently representative of others").

In that regard, Ocean's claim charts properly demonstrate how the ASML YieldStar system performs each limitation of each asserted claim of the '330 patent. For example, Ocean's '330 patent claim chart references three YieldStar metrology tools: YieldStar 375F, YieldStar

380G, and YieldStar 1375F. The YieldStar 380G and YieldStar 1375F are successors of YieldStar 375F. *See* YieldStar 380G Product Overview, *available at* https://www.asml.com/en/products/metrology-and-inspection-systems/yieldstar-380g ("The YieldStar 380G is the successor of the YieldStar 375F"); *see also* "Yieldstar S-1375F," *available at* https://www.asml.com/-/media/asml/files/products/yieldstar-systems/yieldstar-s-1375f.pdf ("The YieldStar S-1375F re-uses the continuous wavelength concept from the YieldStar S-375F"). Because these models are in the same family line and where the subsequent models (YieldStar 380G and YieldStar 1375F) succeeded the parent model (YieldStar 375F), there is no factual basis to support the notion that these models perform differently with respect to the alleged functionalities. Nor has STMicro provided any explanation as to why the accused functionalities with respect to the claimed methods are lacking in any of these "models." To the extent that STMicro possesses evidence showing that a particular YieldStar "model" does not perform a particular limitation, please forward such evidence to us for further review and consideration.

STMicro also contends that there is no support for the contention that "a grating structure is formed on at least a portion of any wafer relating to the accused products to facilitate concurrent measurements of one or more critical dimensions and overlay." (Correspondence at 4-5.) Ocean disagrees. The PICs discuss several examples of a grating structure formed on at least a portion of a wafer. In one example, the PICs describe "an individual grating size below 5 x 5 μm2." (Appendix A9 at 7.) As another example, the PICs describe the use of "double-grating stacks" for measuring the "overlay shift." (*Id.* at 9.) Actual images of such gratings are also depicted in the PICs. (*Id.* at 23.) As yet another example, the PICs describe that "the YieldStar system employs top gratings and bottom gratings to measure the accuracy of overlay," with images of such gratings being provided in the PICs. (*Id.* at 42-43.)

Based on the foregoing, Ocean respectfully declines STMicro's invitation to dismiss Ocean's allegations against STMicro related to the '330 patent.

'402 Patent

STMicro, in a generic fashion, contends that "Ocean fails to explain how the cited materials provide evidence regarding how the accused third-party software actually works," nor does it "provide evidence that any of the accused products are actually manufactured using the third-party software." (Correspondence at 5.) In support of this generic assertion, STMicro offers one example in which Ocean allegedly "provides no evidence that the accused third-party software (Applied Materials' E3 software, PDF Solutions' Exensio software, and camLine's LineWorks software)" "translat[es] the state data from a first communications protocol to a second communications protocol compatible with the fault detection unit," as claimed in the '402 patent. (*Id.*) This is incorrect.

As a preliminary matter, STMicro has not explained ***why*** Ocean's cited evidence with respect to the "translating" limitation does not demonstrate "how the accused third-party software actually work[s]" or that the '402 infringing instrumentalities are "manufactured using the third-party software." Other than a generic conclusion, STMicro has not offered any

technical explanation as to why Ocean's cited evidence does not meet the "translating" limitation. Indeed, STMicro's complaint lacks any substance, concluding, without support, that "there is no evidence that the products do, in fact, operate in accordance with the disclosures of the cited references." (Correspondence at 5.) To that end, Ocean refers STMicro to Ocean's PICs for a detailed explanation about Ocean's infringement theories as to this specific limitation. (*See, e.g.*, Appendix A4 at 8-10.)

STMicro also contends that "Ocean does not even attempt to show that the third-party software could perform the 'act of sending.'" (*Id.*) It is not clear which "act of sending" limitation STMicro is referencing, as claim 1 recites three different "acts of sending"—namely, "sending the state data," "sending the translated state data," and "sending an alarm signal." At any rate, just like the "translating" limitation, STMicro merely concludes that "there is no evidence" when Ocean's PICs have offered a plethora of citations demonstrating how the E3, Exensio, and LineWorks systems meet these limitations. Because STMicro has not explained why Ocean's cited evidence is inadequate or does not put STMicro on notice as to Ocean's infringement theories, Ocean reserves the right to address these concerns should STMicro provide substantive information on the foregoing.

Based on the foregoing, Ocean respectfully declines STMicro's invitation to dismiss Ocean's allegations against STMicro related to the '402 patent.

'538 Patent

STMicro again complains that Ocean's PICs do not "provid[e] any indication that the separate and distinct references all relate to, and describe, the same software." (Correspondence at 6.) Ocean disagrees. Our review shows that references cited in the PICs are in fact directed to the same software. For example, all references cited in Appendix A13 pertain to the E3 system. Similarly, all references cited in Appendix A14 cover the LineWorks system. The same is true for Appendix A15, which is directed to the Exensio platform.

STMicro also contends that "Ocean cites no evidence that the accused products are manufactured by 'performing in said computer the fault detection analysis relating to processing of a subsequent workpiece using said adjusted weighting." (*Id.*) This is factually incorrect, as Ocean's PICs provide detailed facts and explanation directed to this very limitation. (*See, e.g.*, Appendix A13 at 12-14; Appendix A14 at 14-21; Appendix A15 at 16-18.)

STMicro further contends that, while the various references cited by Ocean indicate that "third-party software can potentially perform certain functions," "the references do not indicate that that third-party software must perform these functions, even if the platforms are used in manufacturing the accused products." (Correspondence at 6.) STMicro, however, has offered no evidence for this bare assertion. Also, the distinction that STMicro attempts to draw between "can potentially perform" and "must perform" is a red herring, as STMicro does not, and indeed cannot, dispute, that it is on notice as to Ocean's infringement theories. In that regard, whether the third-party offending systems can potentially perform, or actually perform, the claimed methods is a matter of third-party discovery. Ocean's PICs are not deficient simply because

STMicro does not agree with Ocean's infringement theories. *See, e.g., Pisony v. Commando Constrs., Inc.,* No. 6:17-cv-00055-ADA, 2020 U.S. Dist. LEXIS 210013 at *4 (W.D. Tex. Nov. 10, 2020) ("Proper infringement contentions provide notice of the accusing party's specific theories of infringement"). Ocean's PICs have sufficiently shown that the offending systems do, in fact, perform the claimed methods and STMicro has not shown otherwise. Ocean's PICs have sufficiently shown that the offending systems do, in fact, perform the claimed methods, thereby affording STMicro with adequate notice for discovery, claim construction, and trial purposes.

Based on the foregoing, Ocean Semiconductor respectfully declines STMicro's invitation to dismiss Ocean's allegations against STMicro related to the '538 patent.

'691 Patent

Citing to Ocean's Appendix A10, STMicro complains that "Ocean does not identify 'a plurality of tools' from which metrology data is collected or demonstrate that there is any collection of 'metrology data.'" (Correspondence at 6.) Ocean disagrees. As stated in Ocean's PICs, the E3 system allows engineers to "analyze sensor data from manufacturing equipment, detect out-of-norm conditions and relate them to problem with *tools*." (*See, e.g.*, Appendix A10 at 3.) The PICs also specify a number of "tool priority sensors" used by these tools for "collect[ing] the relevant FDC and metrology data." (*Id.*) The PICs also provide examples of such sensors. (*Id.* at 8.) As such, Ocean has proffered sufficient evidence identifying the "plurality of tools."

As to limitation 1(c) of claim 1, STMicro complains that Ocean has not provided evidence relating to filtering the metrology data, including "how the cited 'sensor priority' disclosures result in 'filtering' of the metrology data." (Correspondence at 7.) Ocean disagrees. The evidence cited by Ocean points to, in one example, the sensor data from various sensors being filtered based on the collection purpose data to determine whether the sensors "are known to impact yield [or reliability] if they go out of range," "are known to have no yield [or reliability] impact if they go out of range," are "suspected to impact or not impact yield [or reliability]," or are "known to be a non-issue" of they go out of range. (*See, e.g.*, Appendix A10 at 7-8.) In another example, Ocean's PICs point out that the metrology data is filtered based on the collection purpose data so that "sensors, sensor trace regions, and features can be ranked according to their impact on quality variability." (*Id.* at 9.) In yet another example, Ocean's PICs specify another type of filtering in the form of applying "supervised" and "unsupervised" models to the data. (*Id.*) In yet another example, Ocean's PICs specify that the metrology data is filtered based on the collection purpose data, for example, via "Fault Detection and Classification (FDC) algorithms" in order to "identify, for example, root causes at tool and sensor level, predict yield problem, and yield driven control limits." (*Id.* at 11.)

Similarly, STMicro incorrectly contends that "there is no evidence regarding this data being 'generated.'" (Correspondence at 7.) As a preliminary matter, it is not clear which "data" STMicro is referring to. Based on the surrounding context, it appears that STMicro is referring to the metrology data because in the two preceding sentences, STMicro references the "'filtering' of the metrology data." However, claim 1 does not recite generating the metrology data; instead,

it recites "generating context data." In that regard, Ocean's PICs provide numerous citations showing how the context data is generated. (*See, e.g.*, Appendix A10 at 4-11.)

STMicro also complains that, while Ocean's cited evidence shows that "information [is] provided by a fault detection (FD) system along with metrology and context information (e.g., product type) to provide models that predict metrology values for a process," "there is no evidence that these 'models' involve 'filtering the metrology data . . . ." (Correspondence at 7.) Ocean again disagrees because the PICs are explicit that these models are used to do just that. In fact, the very citation cited in Ocean's PICs (*i.e.*, the "Solutions for Factory and Equipment Efficiency" article) depicts a diagram that expressly shows how filtering is performed (*see, e.g.*, Appendix A10 at 10), as shown below:

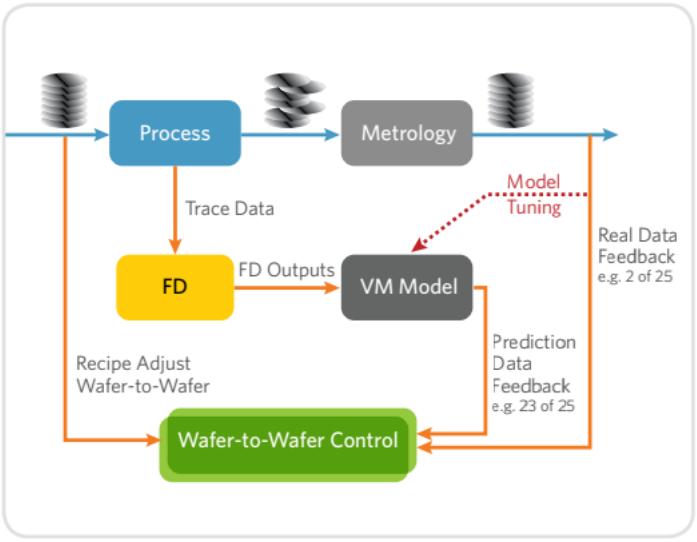


Figure 1: Virtual metrology utilized to enable wafer-to-wafer control by providing feedback data for all wafers not directly measured.

For example, as shown above, the metrology data can be filtered using the "VM model" in order to provide "wafer-to-wafer" control. As such, Ocean has provided sufficient notice as to how the "filtering" limitation is met with respect to the E3 system.

STMicro also claims, in a conclusory fashion, that Ocean provides no evidentiary support for this "filtering" limitation with respect to the Exensio and LineWorks platforms but STMicro has not otherwise provided any technical arguments or reasoning to substantiate that claim. As such, it is not possible for Ocean to assess the merit of STMicro's position. Ocean reserves the right to address these concerns in the event that STMicro provides more information as to why the evidence cited in Ocean's PICs (which, ironically, is also identified in STMicro's Correspondence) does not give STMicro notice as to Ocean's infringement theories.

Turning to limitation 1(d), with respect to the Exensio platform, STMicro alleges that "Ocean cites no evidence that any process control activity is performed" or doing so "based on the filtered metrology data." (Correspondence at 7.)[1] Specifically, as to the Exensio platform, STMicro recognizes and even cites to Ocean's evidence, including "determine[ing] whether to downgrade or scrap the die or chipset package," "identifies losses . . ., which in turn, allow quick actions," and "identifies invisible defects . . . and optimizes system performance," in its Correspondence but nonetheless concludes that Ocean's allegations are "without any supporting evidence." (*Id.*) This is perplexing as Ocean accompanies these allegations with multiple examples and provides direct citations to the underlying evidence, none of which is even mentioned or discussed in STMicro's Correspondence.

For example, in support of Ocean's allegations that "the Exensio platform detects early life failure of a particular die or chipset package and determine whether to downgrade or scrap the die or chipset package" "based on the filtered metrology data," Ocean points to "S1.2—Exensio Platform Presentation at 6" for the support that "based on the filtered metrology data, the Exensio platform detects early life failure of a particular die or chipset package and determine whether to downgrade or scrap the die or chipset package." (Appendix A12 at 11-12.) As another example, in support of Ocean's allegations that "the Exensio platform identifies losses due to problems in fabrication, test and design, which in turn, allow quick actions to be taken to improve key performance metrics, including achieving and more stable yields, reducing scraps, allowing more consistent and optimized test, and increasing engineering productivity," Ocean's PICs cite to the Exensio article "Exensio-Yield, Rich Semiconductor Capabilities Delivered on an Easy-to-Use Analytics Platform." (*Id.* at 13.) As yet another example, Ocean's PICs specify that "the Exensio platform identifies invisible defects, traces components during assembly and packaging, and optimizes system performance across supply chain based on the filtered metrology data" by citing to the "PDF Needham Conference Presentation" as evidence. (*Id.* at 14.) Each of these allegations sufficiently demonstrates that the Exensio platform conducts a process control activity related to one of the tools based on the filtered metrology data.

PDF Solutions also openly discusses the Exensio platform's ability to conduct a process control activity related to one of the tools based on filtered metrology data—"real-time data analytics" are used "to maximize yield, improve equipment performance, and minimize waste in your semiconductor manufacturing environment" in parallel with "existing process control tools." *See, e.g.*, "Bult for Industry 4.0," *available at* https://www.pdf.com/products/exensio-analytics-platform/modules/process-control/ (last visited Sept. 7, 2021).

For at least these reasons, STMicro is incorrect that Ocean has not identified any evidence for limitation 1(d) with respect to the E3 system.

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[1] STMicro's Correspondence points only to the E3 and LineWorks for this purported deficiency. Accordingly, Ocean limits its discussion to only these offending systems and will not address Exensio separately.

With respect to camLine's LineWorks, STMicro again alleges, without providing any evidence, that Ocean has not identified any "process control activity" that is conducted "based on the filtered metrology data" (*see* Correspondence at 8) and mistakenly concludes that "Ocean simply sites [sic] a collection of camLine documents without connecting them to any 'filtered metrology data.'" This is again incorrect because Ocean's PICs explicitly describe such activities, including controlling and updating a state of a control model employed by a processor controller associated with one of the tools as well as determining at least one parameter of an operating recipe employed by one of the tools (Appendix A12 at 28-30.) Many other examples are also provided in the PICs. (*See, e.g.*, *id.* at 9-16.)

As to claims 2 and 5, STMicro again contends in a conclusory fashion that Ocean has not provided any evidence (Correspondence at 8), ignoring all of the evidentiary citations identified in Ocean's PICs.[2]

With respect to claim 8, STMicro concludes that Ocean's cited evidence "does not describe any exclusion of data, nor does the evidence support Ocean's assertion that 'targeting would necessarily include the exclusion of certain unnecessary data." (Correspondence at 8.) STMicro, however, has not offered any technical explanation as to why "targeting" "does not necessarily include the exclusion of certain unnecessary data"—a point made abundantly clear in Ocean's PICs. In that regard, STMicro's concern with respect to claim 8 is not directed to the sufficiency of Ocean's PICs or whether Ocean has provided sufficient notice to STMicro as to Ocean's infringement theories; instead, it is directed to STMicro's mere speculation as to its non-infringement theory. Because STMicro does not dispute that Ocean's PICs offer evidence in support of STMicro's infringement with respect to claim 8, nothing more is required. *See, e.g.*, *Motion Games*, 2015 WL 1774448, at *2.

Based on the foregoing, Ocean respectfully declines to dismiss its allegations against STMicro related to claims 1, 2, 5, and 8 of the '691 patent.

'305, '248, and '097 Patents

With respect to the '305 and '248 patents, STMicro has made several generic allegations about Ocean's PICs without pointing to any specific evidence or instance. For example, STMicro alleges that Ocean "fails to provide sufficient evidence to connect the cited materials to the manufacture of the accused products," that "Ocean's contentions mix disclosures from various generic references, including marketing information, textbooks, and research papers," that Ocean "does not link any of that material to the actual processes used to manufacture the accused products," and that Ocean's contentions mix and match these isolated references for individual claim limitations without showing that any accused product is manufactured in a single process that meets all claim limitations." (Correspondence at 8.) Similarly, with respect to the '097 patent, STMicro alleges that Ocean "has provided no evidence that the accused

[2] STMicro's Correspondence does not specify which offending system this purported deficiency is directed towards. As such, it is not possible for Ocean to address the merits of STMicro's position. Ocean reserves the right to further address these claims once STMicro provides this information and explains why Ocean's PICs (and evidence cited therein) do not sufficiently place STMicro on notice of Ocean's infringement theories.

products are manufactured using the isotropic etch step claimed in the '097 patent" because the cited evidence "never suggests that the disclosed process was implemented in the manufacture of the accused products." (Correspondence at 9.)

But these allegations, like those made above with respect to the '691 patent, are directed to STMicro's possible non-infringement theories, not whether Ocean has specifically identified where each element of each asserted claim is found within each Accused Instrumentality in Ocean's claim charts or whether Ocean's PICs have sufficiently placed STMicro on notice as to Ocean's infringement theories.

In that regard, STMicro's concerns (e.g., the claimed methods are purportedly not used to manufacture the accused products) appear to be the same, if not substantially similar, to those presented in STMicro's Motion to Dismiss (Dkt. 18) that is now pending before the Court. Ocean reserves the right to further address these concerns once the Court has issued its ruling on this motion.

Additionally, with respect to the '305 and '248 patents, STMicro alleges that the "theses and conference papers [cited by Ocean] similarly fail to tie the accused software to the claims, as they refer simply to 'experimental results' or 'experimental tests,' 'schedule simulator,' and 'use cases.'" (Correspondence at 8.) But even if these "theses and conference papers" are "experimental" in nature, this does not lend any credibility to STMicro's assertion that the methodologies referenced in these "theses and conference papers" are/were not "actually employed in any production lines used to manufacture the accused products." In fact, the cited "theses and conference papers" specifically refute this claim. For example, the "Knopp Thesis" presents "industrial instances that were extracted from the Manufacturing Execution System (MES) of a semiconductor manufacturing facility over a period of one year"—instances that "were provided by STMicroelectronics and modified to anonymize confidential data." (*Id.* at 58-59.) In other words, the Knopp Thesis presents data and results that are based on methodologies actually deployed in STMicro's actual production lines.

As another example, the "Smart Sampling Scheduling and Skipping Simulator" is unequivocal that the "referenced methodologies" were deployed in STMicro's production pipelines (via the STMiroelectronics Rousset fab) with results extracted from multiple "metrology tools." (*Id.* at 1915.)

In that regard, whether the claimed methods are/were actually deployed in STMicro's or TSMC's production lines to manufacture the accused products is a matter of fact discovery, which is currently stayed until completion of the parties' *Markman* hearing. The same is true with respect to the '097 patent—whether the accused products are manufactured "in a single process that meets all claim limitations" (Correspondence at 9) is subject to party and third-party discovery. Tellingly, STMicro does not dispute that the cited evidence demonstrates, at a minimum, the presence of each claim element; instead, it shifts its focus onto viability of Ocean's infringement theory, which is not appropriate in analyzing whether Ocean has placed STMicro on notice as to Ocean's infringement theories.

If STMicro disputes that the claimed methods are/were deployed in STMicro's manufacturing facilities, or that the claimed methods are not executed in "a single process that meets all claim limitations," Ocean is open to discussing and commencing early party and third-party fact discovery to allow both parties to exchange technical documents and take deposition of relevant technical witnesses so that these matters can be resolved well in advance of the parties' *Markman* hearing.

Based on the foregoing, Ocean respectfully declines STMicro's invitation to dismiss Ocean's allegations against STMicro as to the '305, '248, and '097 patents.

Should it be necessary, Ocean is available to meet and confer with STMicro to discuss any of the foregoing issues.

Very truly yours,

/s/ *Alex Chan*
Alex Chan